

PROGRAM

Sunday Evening, 2 NOVEMBER 1997

Registration: 5:00 PM to 7:00 PM
Location: South Foyer
Set Up Poster: 5:00 PM to 7:00 PM
Location: Ballroom VI-VIII

Monday Morning, 3 November 1997

7:00 A.M. Registration
Location: South Foyer
7:00 A.M. Set up Poster Presentations
Location: Ballroom VI-VIII

PLENARY SESSION
Location: Ballroom IV-V
MODERATOR: Gary L. Obenauf

8:30 - 8:50 Welcome and California Perspective on Methyl Bromide
Jean-Mari Peltier, Chief Deputy Director of California Department of Pesticide Regulation

8:50 - 9:20 Update on Montreal Protocol
Keith Pitts, USDA, Special Assistant to the Deputy Secretary
Office of the Secretary

9:20 - 9:30 Housekeeping
Gary L. Obenauf, MBO Program Committee Chairman

9:30- 10:00 Break
Location: Ballroom VI-VIII

Monday Morning, 3 NOVEMBER 1997, Concurrent Sessions

PREPLANT SESSION: 10:00 AM Until 12:00 Noon
MODERATOR: Frank Westerlund
Location: Ballroom IV

10:00 - 10:20 Harry Hoitink,[1] Compost as a Substitute for Methyl Bromide Fumigation in Plant Disease Control
10:20 - 10:40 John Bowers,[2] Effect of Botanical Extracts on Soil Populations of Fusarium and Other Soilborne Pathogens
10:40 - 11:00 George Lazarovits, [3] High Nitrogen Containing Organic Amendments for the Control of Soilborne Plant Pathogens
11:00 - 11:20 George Lazarovits,[4] Mechanisms Associated with Disease Control by Organic Soil.
11:20 - 11:40 Charles L. Wilson,[5] An Apparatus for the Rapid Evaluation of Natural Soil Fumigants Such as Benzaldehyde
11:40 - 12:00 Saad L. Hafez,[6] Alternative to Methyl Bromide for Nematode Management in Orchard and Row Crops.

POSTHARVEST SYMPOSIA: Insect Monitoring/Precision Targeting 10:00 am until 12:00 noon
MODERATOR: Richard Brenner
Location: San Diego I-II

Richard Brenner, [50] Spatial Analysis in Precision Targeting for Integrated Pest Management: Concepts and Processes
Richard Arbogast, [51] Trapping and Spatial Analysis for Precision Targeting of Storage Pests in Large Retail Stores
Brian C. Zeichner, [52] Precision Targeting and Baiting Techniques Economizing Non-Chemical Thermal Control of German Cockroaches
Nan-Yao Su,[53] Elimination of Structure-Infesting Termite Populations Using Precision Targeting and Baiting Techniques
Dennis Shuman, [54] Automated Electronic Sensing of Insects as a Data Source for Spatial Analysis

LUNCH BREAK 12:00 Until 1:30 PM	

Monday Afternoon, 3 NOVEMBER 1997, Concurrent Sessions	
<p>PREPLANT SESSION: 1:30 PM Until 3:10 PM Moderator: Scott Yates Location: Ballroom IV</p> <p>1:30 - 1:50 Tracy L. Connell, [7] A Soil Bacterium Which Grows on Methyl Bromide and its Application to the Dissipation of Methyl Bromide During Soil Fumigation</p> <p>1:50 - 2:10 Don W. Dickson, [8] 1, 3-Dichloropropene Enhanced Degradation: Does it Affect Efficacy</p> <p>2:10 - 2:30 Jay Gan, [9] Surface Application of Fertilizer Ammonium Thiosulfate to Reduce Methyl Bromide Emission from Soil</p> <p>2:30 - 2:50 Dong Wang, [10] 1, 3-D Emission Reduction with Drip Irrigation</p> <p>2:50 - 3:10 Scott R. Yates, [11] Will Virtually Impermeable Films Eliminate Methyl Bromide Emissions from Preplant Fumigation?</p> <hr/> <p>3:00 PM Until 3:30 PM BREAK Location: Ballroom VI-VIII</p> <hr/> <p>PREPLANT SESSION: 3:30 PM Until 5:10 PM MODERATOR: Jim Gilreath Location: Ballroom IV</p> <p>3:30 - 3:50 Don W. Dickson, [12] Fumigants and Nonfumigants for Replacing Methyl Bromide in Tomato Production</p> <p>3:50 - 4:10 Charles Keddy, [13] Results of Alternative Applications on Weed Control in a Strawberry Nursery</p> <p>4:10 - 4:30 Ian J. Porter, [14] Methyl Bromide for Preplant Soil Disinfestation in Temperate Horticultural Crops in Australia in Perspective</p> <p>4:30 - 5:10 Mohamed Besri, [15] Alternatives to Methyl Bromide for Preplant Protected Cultivation of Vegetables in the Mediterranean Developing Countries</p>	<p>POSTHARVEST SESSION: 1:30 PM Until 2:50 PM Moderator: Wally Ewart Location: San Diego I-II</p> <p>1:30 - 1:50 C.H. Bell, [55] Use of a Microprocessor-Controlled Sensor-Linked Dosing System to Regulate Application of Fumigants to Structures and Enclosures</p> <p>1:50 - 2:10 Eli Shaaya, [56] Phyto-Oils as Alternatives for the Control of Insects Attacking Stored Products and Cut Flowers</p> <p>2:10 - 2:30 Yigal Carmi, [57] Evaluation of Methyl Iodide and Carbon Disulfide as Alternatives to Methyl Bromide for the Control of Stored-Product Insects</p> <p>2:30 - 2:50 Bishu Chakrabarti, [58] The Potential for Phosphine to Replace Methyl Bromide</p> <hr/> <p>3:00 PM Until 3:30 PM BREAK Location: Ballroom VI-VIII</p> <hr/> <p>POSTHARVEST SYMPOSIA: Quality of Commodities from Alternative Treatments. 3:30 PM Until 5:30 PM MODERATOR: Harvey T. Chan, Jr. Location: San Diego I-II</p> <p>Harvey T. Chan, Jr, [59] Maintaining Market Quality in Quarantine Treatments: Issues and Approaches</p> <p>Judy Abbot, [60] What is Quality and How can we Measure It?</p> <p>Ray McGuire, [61] Confronting Postharvest Decay in Quarantine Treated Commodities</p> <p>Arnold Hara, [62] Market Quality in Disinfested Flowers, Foliage, and Propagated Plant Material</p> <p>Krista Shellie, [63] Commodity Treatment Protocols: Preserving the Commodity While Killing the Pest</p> <p>Louie Aung, [64] Biochemical/Phytotoxic Responses of Fresh Commodity to Alternative M B Treatments</p> <p>Michael Lay-Yee, [65] Can Crops Grown in Temperate Climates Handle Heat Disinfestation</p>

6:00 PM - 7:00 PM	POSTER SESSION:	Moderator: Bill Thomas	Location: Ballroom V-VIII
6:30 PM - 8:00 PM	RECEPTION		
	Location: Ballroom V-VIII		

Tuesday Morning, 4 NOVEMBER 1997, Concurrent Sessions REGISTRATION: Location: South Foyer			
PREPLANT SESSION: 8:00 AM Until 9:20 AM MODERATOR: Dan Chellemi Location: Ballroom IV		POSTHARVEST SESSION: 8:00 AM Until 9:20 AM MODERATOR: Rick Bruno Location: Ballroom V	
8:00 - 8:20	S. J. Locascio, [16] Soil Temperature as Affected by Soil Solarization in a Humid Climate	8:00 - 8:20	Stephen R. Drake,[66] Irradiation as an Alternative to Methyl Bromide for Quarantine Treatment of Sweet Cherries
8:20 - 8:40	J.Noling,[17] Relative Lethal Dose, A Time-Temperature Model for Relating Soil Solarization Efficacy and Treatment Duration for Nematode Control	8:20 - 8:40	Joseph Borsa,[67] Irradiation for Quarantine Disinfestation: Practical Aspects and Options
8:40 - 9:00	David T. Patterson,[18] Factors Affecting the Suppression of Nutsedge by Translucyent Plastic Film Mulch	8:40 - 9:00	Jaime G. Gonzalez,[68] Wax Treatments Meeting Probit 9 Requirements for Controlling <i>Brevipalpus Chilensis</i> in Cherimoyas and Citrus Fruit
9:00 - 9:20	Carl E. Sams,[19] The potential for Utilizing <i>Brassicac</i> s as an Alternative to Methyl Bromide in Controlling Soilborne Diseases	9:00 - 9:20	Laurie G. Houck,[69] Postharvest Response of Lemon Fruit to Hot Water Immersion, Quarantine Cold or Methyl Bromide Fumigation Treatment Depends on Preharvest Growing Temperature
BREAK 9:30 AM Until 10:00 AM Location: Ballroom VI-VIII			

PREPLANT SYMPOSIA: Cropping Systems 10:00 AM Until 12:00 Noon MODERATOR: Joe Noling Location: Ballroom IV		STRUCTURAL SESSION:10:00 AM Until 1:00 PM MODERATOR: Susan Lawrence Location: Ballroom V	
John Baritelle	One Grower's Perspective on the Loss of Methyl Bromide in California Perennial Cropping Systems	10:00 - 10:20	Robert Brigham,[70] jCorrosive Effects of Interactions of Phosphine, Carbon Dioxide, Heat and Humidity on Electronic Equipment
Philip Roberts	Host Plant Resistance to Nematodes in Annual Cropping System	10:20 - 10:40	Bill B. Brodie,[71] Decontamination of Golden Nematode Infested Equipment with Steam Heat
Stephen Gliesman	Redesigning Strawberry Agro Ecosystems for Management without Methyl Bromide	10:40 - 11:00	Alan K. Dowdy,[72] Distribution and Stratification of Temperature in Processing Plants During Heat Sterilization
Kirk Larson	Advances in Research for Alternative to Methyl Bromide Soil Fumigation for California	11:00 - 11:20	Paul Fields,[73] Diatomaceous Earth Combined with Heat to Control Insects in Structures
		11:20 - 11:40	David Mueller,[74] ECO ₂ FumeJ , Fumigant Gas .

Charles (Chip) Hinton Strawberry Production Methyl Bromide Alternatives: A Florida Strawberry Industry Perspective	11:40 - 12:00 Ron Noyes,[75] Application of ECO ₂ FumeJ to Stored Wheat in Sealed Steel Bins 12:20 - 12:40 Thomas W. Phillips,[76] Mortality of Stored-Product Insects Exposed to ECO ₂ FumeJ Fumigant Gas 12:40 - 1:00 Rudy Bergen, [77] Evolution of Quality and Insect Control in a Flour Mill.
<p align="center">Tuesday Afternoon, 4th NOVEMBER, 1997 - Concurrent Sessions</p>	
<p>PREPLANT SESSION: 1:30 PM Until 3:10 PM MODERATOR: Don Dickson Location: Ballroom IV</p> <p>1:30 - 1:50 Mark Lancaster, [20] Dazomet Activity Towards Southern Bacteria Wilt and Non-Activity Towards Fusarium in Plasticulture Tomato Production 1:50 - 2:10 John M. Duniway, [21] Response of Strawberry to Some Chemical and Cultural Alternatives to Methyl Bromide Fumigation of Soil Under California Production Condition 2:10 - 2:30 Salvadore J. Locascio, [22] Pest Control with Alternative Fumigants to Methyl Bromide for Tomato 2:30 - 2:50 James P. Gilreath, [23] Field Validation of 1, 3-Dichloropropene + Chloropicrin and Pebulate as an Alternative to Methyl Bromide in Tomato 2:50 - 3:10 Philip B. Hamm, [24] The Comparison of Methyl Bromide, Metam Sodium (VAPAM) and Telone C-17 Soil Fumigants with Watermelon and Tomatoes in the Columbia Basin of Oregon</p>	<p>POSTHARVEST SESSION: 1:30 PM Until 3:10 PM MODERATOR: Pat Vail Location: Ballroom V</p> <p>1:30 - 1:50 Guy Hallman, [78] Irradiation Quarantine Treatment Doses for Apple Maggot, Blueberry Maggot, and Plum Curculio 1:50 - 2:10 Guy Hallman, [79] Concerns with Temperature Quarantine Treatment Research 2:10 - 2:30 Robert L. Mangan, [80] Commodity Independent Heat Treatment Parameters for Disinfestation from Anastrepha Fruit Flies 2:30 - 2:50 Lisa Neven, [81] Development of Combination Heat and Cold Treatments for Postharvest Control of Codling moth in Apples and Pears 2:50 - 3:10 Marc A. Seidner, [82] Method for Heat-treating Wood and Wood Products - The Clean Kill</p>
<p align="center">BREAK 3:00 PM Until 3:30 PM Location: Ballroom VI-VIII</p>	
<p>PREPLANT SYMPOSIA: Forestry Cropping Systems Location: Ballroom IV 3:30 PM - 5:30 PM MODERATOR: Frank K. Burch</p> <p>Robert L. James, [25] Alternatives to Chemical Soil Fumigation in Western Federal Bareroot Conifer Nurseries John P. Jones,[26] Biological Control of Pythiaceous Fungi Causing Death to Longleaf Pine Seedlings in Cold Storage Clark W. Lantz,[27] Alternatives to Methyl Bromide in Southern Forest Tree Nurseries</p>	

BREAK 3:00 PM Until 3:30 PM

Location: Ballroom VI-VIII

Gary K. Smith,[28]	Development of Alternatives to Methyl Bromide for Forestry Uses: The Role and Accomplishments of USDA-Forest Service, Forest Health Protection
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Wednesday Morning, 5 NOVEMBER 1997, Concurrent Sessions REGISTRATION: Location: South Foyer			
PREPLANT SESSION : 8:20 AM Until 9:20 AM MODERATOR: Chip Hinton Location: Ballroom IV		POSTHARVEST SESSION: 8:00 AM Until 9:20 AM MODERATOR: Lisa Neven Location: Ballroom V	
8:20 - 8:40	Lori Lynch,[29] Economic Implications of Banning Methyl Bromide: How have they changed with Recent Developments?	8:00 - 8:20	Shijun Zhou,[83] Controlled Atmosphere Treatments for Postharvest Control of Two-Spotted Spider Mites (<i>Tetranychus urticae</i>)
8:40 - 9:00	Brent M. Hueth,[30] Economic Impact of Banning Methyl Bromide Use in California Agriculture	8:20 - 8:40	Krista Shellie,[84] Grapefruit and Mexican Fruit Fly Tolerance to Refrigerated Controlled Atmosphere Atorage
9:00 - 9:20	Van Johnson,[31] Use of Methyl Bromide and Other Chemical Pest Control By Strawberry and Fresh Tomato Growers	8:40 - 9:00	Burrell Smittle,[85] Is 150 Gy Overkill for Caribbean Fruit Fly Larvae?
		9:00 - 9:20	Mats Igemanson,[86] MidsJ Infrared Technology-Effective, Benign, Affordable
Break 9:30 AM Until 10:00 AM Location: Ballroom VI-VIII			
PREPLANT SESSION: 10:00 AM Until 12:20 PM MODERATOR: Dan Legard Location: Ballroom IV		POSTHARVEST SESSION: 10:00 AM Until 11:40 AM MODERATOR: Ralph Ross Location: Ballroom V	
10:00 - 10:20	Judy A. Thies,[32] Heat Stability of Root-Knot Nematode Resistance in Bell Pepper	10:00 - 10:20	Peter R. Dentener,[87] Securing Market Access for New Zealand Wood Products
10:20 - 10:40	C.Winterbottom,[33] Evaluation of Relative Resistance of Different Strawberry Cultivars to Phytophthora and Verticillium Dahliae as a Potential Alternative to Methyl Bromide	10:20 - 10:40	Franziskus Horn,[88] The Horn Phosphine Generator and Fumigation Methods with This New Tool for Space, Stored Products and Fruits
10:40 - 11:00	G. T. Browne,[34] Walnut Rootstock Selection for Resistance to	10:40 - 11:00	Judy Johnson,[89] Effect of Low Temperature Storage on

11:00 - 11:20	Phytophthora spp Geoff Zehnder, [35] PGPR: A Potential Alternative to Methyl Bromide Fumigation in Vegetable Production	11:00 - 11:20	Survival and Reproduction of Indianmeal Moth Elmer Schmidt,[90] Penetration of Fumigants into Logs for Pest Eradication and Stain Prevention
11:20 - 11:40	Robert P. Larkin,[36] Biological Control of Fusarium Wilt of Tomato Under Varying Environmental Condition	11:20 - 11:40	Brad R. White, [91] Field-Testing Phytosanitation Treatments on Chilean Radiata Pine
11:40 - 12:00	Frank V. Sances,[37] Conventional and Organic Alternatives to Methyl Bromide on California Strawberries		Paul K. Ndalut, [92] Pyrethrum Extract, A Viable Alternative to Methyl Bromide in Grain Fumigation-Review
12:00 - 12:20	Janny G. M. Vos[38] Review of Use of Alternatives to Methyl Bromide for Horticultural Crops in Asia		
LUNCH BREAK until 1:30 PM			

Wednesday Afternoon, 5 NOVEMBER 1997 , Preplant Sessions

PREPLANT SESSION: 1:30 PM Until 3:10 PM
MODERATOR: Dan Botts

Location: Ballroom IV

1:30 - 1:50	J. O. Becker,[39] Achievable Yield in a Commercial Fresh Carrot Production Field in California
1:50 - 2:10	Robert T. McMillan, Jr.,[40] Methyl Iodide a Direct Replacement of Methyl Bromide as a Soil Fumigant for Sweet Peppers
2:10 - 2:30	Clyde C. Dowler,[41] Herbicide Efficacy of Metham-Sodium and Methyl Iodide Applied Through Irrigation Systems in Georgia
2:30 - 2:50	S.R. Yates,[42] Propargyl Bromide - A Possible Chemical Alternative to Methyl Bromide for Preplant Fumigation
2:50 - 3:10	Kirk D. Larson,[43] Nursery Soil Fumigation Regime Affects Strawberry Transplant Production, Transplant Size, and Subsequent Fruit Yield

Break 3:00 PM Until 3:30 PM
Location: Ballroom VI-VIII

PREPLANT SESSION: 3:30 PM Until 5:30 PM
Location: Ballroom IV
MODERATOR: Stan Barras

3:30 - 3:50	David L. Dwinell,[44] Management of Disease Losses Through Seed treatments of longleaf and shortleaf pines
3:50 - 4:10	Barry B. Hunter,[45] Field Application of Sewage and Spent Mushroom Composts in Conjunction with Basamid, a Fumigant, to Control the Root Pathogen, <i>Cylindrocladium Scoparium</i> , in Forest Nursery Soils
4:10 - 4:30	Eric A. Pedersen,[46] A Microbial Inoculant for Conifers, an Alternative to Methyl Bromide Fumigation

PREPLANT SESSION: 1:30 PM Until 3:10 PM
MODERATOR: Dan Botts

Location: Ballroom IV

1:30 - 1:50	J. O. Becker,[39]	Achievable Yield in a Commercial Fresh Carrot Production Field in California
1:50 - 2:10	Robert T. McMillan, Jr.,[40]	Methyl Iodide a Direct Replacement of Methyl Bromide as a Soil Fumigant for Sweet Peppers
2:10 - 2:30	Clyde C. Dowler,[41]	Herbicide Efficacy of Metham-Sodium and Methyl Iodide Applied Through Irrigation Systems in Georgia
2:30 - 2:50	S.R. Yates,[42]	Propargyl Bromide - A Possible Chemical Alternative to Methyl Bromide for Preplant Fumigation
2:50 - 3:10	Kirk D. Larson,[43]	Nursery Soil Fumigation Regime Affects Strawberry Transplant Production, Transplant Size, and Subsequent Fruit Yield
4:30 - 4:50	Michael McKenry, [47]	Field Comparisons of 20 Potential Methyl Bromide Alternatives for Tree and Vine Nurseries
4:50 - 5:10	Andrew Nyczepir, [48]	Bahiagrass for the Management of Ring Nematode in Peach
5:10 - 5:30	Michael McKenry,[49]	Failure of Late-November Systemic Herbicide Treatments to Control the Preplant Problem

POSTER SESSION

Posters will be displayed in Coffee Break Area: Ballroom VI-VIII

PREPLANT POSTERS:

Husein Ajwa [93]	Preplant Application of Alternative Fumigants by Irrigation Systems
Leon H. Allen, Jr. [94]	Soil Flooding During the Off-Season as an Alternative to Methyl Bromide
J. O. Becker [95]	Hot Gas Application of Methyl Bromide and Methyl Iodide for Soil Fumigation Field Trials
Michelle M. Cram [96]	Survey of Southern Forest Nurseries: Fumigation Practices and Pest Management Concerns
S. W. Fraedrich [97]	Preliminary Results of the Effects of Dazomet Rate and Incorporation Method on Pest Management in Southern Forest-Tree nurseries
Chad M. Hutchinson [98]	Efficacy of Methyl Iodide Against Nematodes and Plant Pathogens
M. E. Kannwischer-Mitchell [99]	Southern Pine Seedling Health & Quality After Three or Four Consecutive Crops in Fumigated Soil, Soil Treated with Organic Amendments or Untreated Soil
Richard Karsky [100]	Steam: An Alternative to Methyl Bromide?
Yuso Kobara [101]	Reducing Emission of Methyl Bromide From Soil Fumigation: Effect of Shielding Solar Radiation with Non-Woven High-Density Polyethylene Fiber Sheet
James Liebman [102]	California Has Not Yet Reduced Methyl Bromide Use: Implications for Research and Extension Policy
M. E. McGiffen, Jr. [103]	Alternatives for Purple and Yellow Nutsedge Management
Frank N. Martin [104]	Microbial Rhizosphere Colonizers of Strawberry and Their Effect on Plant Growth
Brent S. Sipes [105]	Root-Knot Nematode Control with Tropical Cover Crops
Janny G. M. Vos [106]	Review of Use of Alternatives to Methyl Bromide for Horticultural Crops in Asia

POSTHARVEST POSTERS:

Franklin H. Arthur [107]	Red Flour Beetle Survival After Timed Exposures on Cyfluthrin-Treated Concrete
James E. Baker [108]	Detection of Hidden Insects in Grain by Automated NIR Reflectance Spectrophotometry

Joseph Borsa [109]	Gama Processing: A Practical Answer to Quarantine Security
Stephen R. Drake [110]	Influence of Quarantine Treatments on Sweet Cherry Quality
Steven L. Halverston [111]	Advances in the Use of EHF Energy as a Fumigant for Stored Products
J. D. Hansen [112]	The Systems Approach to Quarantine Security for Northwest Tree Fruits: a Practical Alternative
Mats O. Ingemansson [113]	MIDSJ Infrared Technology - Effective, Benign, Affordable
Gerhard Knapp [114]	Methyl Bromide Emission Control
Lisa G. Neven [115]	Comparison of Alternative Quarantine Treatments for Sweet Cherries
David Obenland [116]	Nectarine Quality Following a Forced-Air Heat Treatment for Fruit Fly Disinfestation
Thomas W. Phillips [117]	Quarantine Treatments for Hawaiian Fruit Flies: Recent Studies with Irradiation, Heat and Cold
Don Silhacek [118]	The Potential of Insect Growth Regulation (IGR) Applications for Managing Beetle Populations in Packaged Commodities
J. Larry Zettler [119]	The Effects of Carbon Dioxide on Methyl Bromide Toxicity

STRUCTURAL POSTERS:

Michael L. Haverty [120]	Non-Chemical Alternatives to Methyl Bromide for Control of Drywood Termites in California
Vernard R. Lewis [121]	Electrocution as a Means of Controlling Drywood Termites in Structure: Efficacy Under Field Conditions
Janine E. Powell [122]	New Directions for Forest Service Termite Research

GENERAL POSTER:

Sheila Jones, [123]	Agriculture and Agri-Food Canada (8x10)
Bell, Dr. C. H., [124]	(Postharvest)- Toxicity of Vikane (Sulfuryl Fluoride) to Eggs of the Mill Moth, Ephestia kuehniella

